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Title:

Heat exchange element for heat exchanger - in which narrow planar condensate removal member is sealed inside bag of flexible film material

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Patent Assignee:

(HADW-) HADWACO LTD OY

Inventors:

ERIKSSON H; JANHUNEN P; RAMM-SCHMIDT L

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Basic Abstract:

WO9833029 A

Heat exchange element is made of a bag (1) of a flexible material in which heat is transferred from vapour being condensed in the interior (3) of the bag to a liquid being evaporated on the exterior surfaces (2) of the bag (1), and at the bottom (10) of which there is an outlet for the condensate formed from the vapour.

The element consists of a planar condensate removal member (9) which is bonded inside the bag (1) and is narrower than the bag (1), and into which the forming condensate is arranged to flow and in which there is formed a hole (13) and at least one condensate outlet duct (8) leading to there. The film material of the bag (1) is pierced in the area of the hole on each side of the condensate removal member.

USE - Heat exchange element for a heat exchanger. It is suitable for use in the evaporation of effluents which contain solid matter like fibrous material from the forest industry, or the treatment of effluents from the bleaching of cellulose.

ADVANTAGE - The condensate removal member seated inside the bag removes the need for glued seams between the condensate removal strips and the films, and the problems of tightness relating to these seams are avoided. The solid matter carried in the suspension can fall from the spaces between the bag within most of the width of the bag bottoms, without accumulating as a cake clogging the spaces between the bags above the bottoms. The self cleaning of the spaces between the bags reduces the need for maintenance of the heat exchanger and increases its capacity by making possible an effective heat exchange over the entire surface area of the bags. (Dwg.1/8)

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